

## APPENDIX A

BENCHMARK CHARACTERISTIC ANALYSIS OF DATA FROM FIXED STATIONS  
IN THE MIDDLE WABASH-BUSSERON WATERSHED

Station	WB-183	Mean	Confid	Confid	Median	Sum	Minimum	Maximum	Lower	Upper	Quantile	Quantile	Range	Quantile	Standard	Std Err	Std Err	Std Err
Valid N	75	Mean	-95.000%	+95.000%	Median	Sum	Minimum	Maximum	Lower	Upper	Quantile	Quantile	Range	Quantile	Variance	Std Dev	Skewness	Kurtosis
Alkalinity (mg/l)	75	197.8533	191.0753	204.6304	200	14839	108	283	180	218	155	38	867.6133	29.45528	3.401202	-0.55068	0.2774	0.878629
Ammonia (mg/l as N)	75	0.11	0.08919	0.130281	0.05	8.25	0.05	0.4	0.05	0.2	0.35	0.15	0.0077	0.088149	0.010719	1.571594	0.2774	1.925184
BOD (mg/l)	35	3.10257	2.51787	3.68766	2.7	108.6	0.5	8	2	3.8	7.5	1.8	2.500286	1.703023	0.287863	1.388355	0.397694	1.708456
CCD (mg/l)	75	23.35733	21.7187	24.9928	22.4	1751.8	5	54	18	26.5	49	8.5	50.57734	7.108239	0.820791	1.326478	0.2774	4.370204
Cyanide (mg/l)	75	0.055133	0.04995	0.065271	0.005	0.385	0.005	0.009	0.005	0.005	0.004	0	3.9E-07	0.008	6.9E-05	5.335841	0.2774	29.91583
Nitrate (mg/l as N)	75	3.503667	3.160741	4.100592	3.8	272.3	0.1	10	1.8	5	9.9	3.2	4.175164	2.042453	0.235842	0.401431	0.2774	1.23013
Total Phosphorus (mg/l as P)	75	0.209333	0.192328	0.227141	0.2	15.73	0.06	0.25	0.06	0.25	0.5	0.09	0.005724	0.075589	0.008076	1.681504	0.2774	5.783317
Total Solids (mg/l)	75	474.4333	452.1711	496.1885	460	35584	280	539	428	498	649	85	8925.088	94.47289	10308077	2.899147	0.2774	13.48232
Superficial Solids (mg/l)	75	87.42867	88.94288	105.9105	67	6557	8	644	50	98	636	48	6453.978	80.33665	9.276478	4.176485	0.2774	31.08017
Discolored Solids (mg/l)	71	372.8732	354.9559	390.7505	370	26474	254	876	343	390	622	47	5730.112	75.69751	8.983641	4.192262	0.284605	27.80629
Sulfate (mg/l)	0																	
TKN (mg/l as N)	75	1.210533	1.125841	1.294526	1.2	90.79	0.6	2.5	1	1.4	1.9	0.4	0.133567	0.365058	0.040283	0.945353	0.2774	1.328011
E cel (CFU/100ml)	71	916.5634	280.8905	1540.236	130	64650	5	16000	40	220	15955	160	7076975	2680.258	315.7146	4.059328	0.284605	17.65684
Hardness (mg/l)	0																	
Chloride (mg/l)	75	275.1867	287.2678	285.1155	278	20539	142	415	246	302	273	56	1862.262	43.15593	4.992987	-0.12588	0.2774	1.348613
Discolored Oxygen (mg/l)	61	9.539508	9.346693	10.3232	9.36	600.21	6.59	15.9	8.62	10.96	9.31	2.37	3.702611	1.924271	0.246371	0.731603	0.30627	0.653721
pH	62	8.040323	7.947526	8.133119	8.115	498.5	6.96	8.63	7.83	8.29	1.67	0.46	0.133554	0.36541	0.046407	-0.79201	0.303902	0.538644
Copper (ug/l)	75	5.601333	4.85367	6.346937	5	420.1	2	20	4	6.8	16	2.8	10.55886	3.246554	0.575231	1.919234	0.2774	5.588723
Iron (ug/l)	75	2453.867	1823.868	3083.876	1900	184040	270	23000	1200	3100	22730	1900	7449789	2739.227	316.1833	5.912497	0.2774	43.53865
Zinc (ug/l)	75	19.324	16.0393	22.6087	19	1449.3	8.9	110	10	20	101.1	10	203.6148	14.27937	1.604894	4.202501	0.2774	23.28866

Station	WB-130	Mean	Confid	Confid	Median	Sum	Minimum	Maximum	Lower	Upper	Quantile	Quantile	Range	Quantile	Variance	Std Dev	Skewness	Kurtosis
Valid N	74	Mean	-95.000%	+95.000%	Median	Sum	Minimum	Maximum	Lower	Upper	Quantile <td>Quantile<td>Range<td>Quantile<td>Variance<td>Std Dev<td>Skewness<td>Kurtosis</td></td></td></td></td></td></td>	Quantile <td>Range<td>Quantile<td>Variance<td>Std Dev<td>Skewness<td>Kurtosis</td></td></td></td></td></td>	Range <td>Quantile<td>Variance<td>Std Dev<td>Skewness<td>Kurtosis</td></td></td></td></td>	Quantile <td>Variance<td>Std Dev<td>Skewness<td>Kurtosis</td></td></td></td>	Variance <td>Std Dev<td>Skewness<td>Kurtosis</td></td></td>	Std Dev <td>Skewness<td>Kurtosis</td></td>	Skewness <td>Kurtosis</td>	Kurtosis
Alkalinity (mg/l)	74	189.0946	180.7289	197.4603	194	13593	106	292	165	212	186	47	1303.84	36.10873	4.197554	-0.09436	0.278197	
Ammonia (mg/l as N)	75	0.163333	0.002634	0.32403	0.05	12.25	0.05	6.1	0.05	0.1	6.05	0.1	0.487658	0.088225	0.080536	8.527614	0.2774	
BOD (mg/l)	35	3.26	2.496334	4.013665	2.7	114.1	0.5	9.5	1.6	4.5	9	2.9	4.813647	2.194003	0.370854	1.070722	0.397694	
CCD (mg/l)	75	24.48133	22.09667	26.866	22.8	1835.1	2.5	60	18.8	29	57.5	9.2	107.4237	10.36454	1.196794	1.23475	0.2774	
Cyanide (mg/l)	2	0.007	-0.01841	0.032412	0.007	0.014	0.005	0.009	0.005	0.005	0.004	0	6E-06	0.002828	0.002			
Nitrate (mg/l as N)	75	5.423933	0.375212	9.883454	3.3	407.2	0.05	170	1.8	4.4	169.95	2.6	374.7742	19.35508	2.233595	8.525223	0.2774	
Total Phosphorus (mg/l as P)	74	0.248856	0.165601	0.37372	0.18	18.425	0.015	3.34	0.13	0.27	3.325	0.14	0.145539	0.381456	0.044348	7.495513	0.278197	
Total Solids (mg/l)	74	483.6216	454.1426	513.1007	455	35788	291	970	429	495	679	66	16189.96	127.2398	14.79133	2.329595	0.278197	
Suspended Solids (mg/l)	74	102.527	76.2696	129.7945	64.5	73587	2	592	46	108	590	62	12844.66	113.3343	13.17484	2.759795	0.278197	
Discolored Solids (mg/l)	69	355.9275	344.4717	367.3033	366	24559	246	447	324	392	201	68	2274.098	47.8675	5.7409	-0.50431	0.288737	
Sulfate (mg/l)	2	144.5	-1005.41	1294.412	144.5	289	54	235					16380.5	127.9863	80.5			
TKN (mg/l as N)	3	3.45	-6.55849	13.45949	2.4	10.35	0.05	7.9					16.2325	4.028858	2.23012	1.093107	1.224745	
E cel (CFU/100ml)	70	413.9265	203.8608	624.0163	70	28975	5	4400	20	340	4195	320	7763137	801.0867	105.31	3.295768	0.286575	
Hardness (mg/l)	75	7.28	1.49488	13.02312	5.2	28975	5	4400	20	340	4195	320	7763137	801.0867	105.31	3.295768	0.286575	
Chloride (mg/l)	74	260.4459	249.7288	271.1951	267	19373	146	360	223	294	214	71	21440.63	46.26899	5.378428	-0.26552	0.278197	
pH	3	61.06667	-143.943	286.0567	28	183.2	0.2	155					6310.813	82.52765	47.64736	1.513574	1.224745	
Discolored Oxygen (mg/l)	59	10.63729	10.14851	11.12507	10.55	485.99	6.74	8.82	7.91	11.89	7.85	2.79	3.501466	1.871739	0.24268	-0.40172	0.311176	
Copper (ug/l)	60	8.098833	7.99741	8.202257	8.125	485.99	6.74	8.82	7.91	11.89	7.85	2.79	3.501466	1.871739	0.24268	-0.40172	0.311176	
Iron (ug/l)	5	8.46	0.670302	16.2407	5.5	236160	300	25000	1000	3400	24700	13	14E+07	3713.955	4317.904	3.969267	0.278197	
Zinc (ug/l)	74	3054.865	2199.414	3915.518	1800	225660	15	66	27	40	51	13	385.7	19.12238	8.552193	1.062118	0.910281	